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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
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### Division of Oil, Gas and Mining

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### Inspection Report Minerals Regulatory Program April 14, 2010

Reviewed:

<b>Mine Name:</b> Bentonite Pits	<b>Permit Number:</b> M/041/0012
<b>Operator Name:</b> Western Clay Company	<b>Inspection Date:</b> March 18, 2010
<b>Inspector(s):</b> John Rogers and Lynn Kunzler	<b>Time:</b> 9:00 am
<b>Other Participants:</b> Corey Thurston (Western Clay)	<b>Mine Status:</b> Active

Elements of Inspection	Evaluated	Comment	Enforcement
1. Permits, Revisions, Transfer, Bonds	X	<input type="checkbox"/>	<input type="checkbox"/>
2. Public Safety (shafts, adits, trash, signs, highwalls)	X	<input type="checkbox"/>	<input type="checkbox"/>
3. Protection of Drainages / Erosion Control	X	<input type="checkbox"/>	<input type="checkbox"/>
4. Deleterious Material	X	<input type="checkbox"/>	<input type="checkbox"/>
5. Roads (maintenance, surfacing, dust control, safety)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Reclamation	X	<input type="checkbox"/>	<input type="checkbox"/>
7. Backfilling/Grading (trenches, pits, roads, highwalls, shafts)	X	<input type="checkbox"/>	<input type="checkbox"/>
8. Soils	X	<input type="checkbox"/>	<input type="checkbox"/>
9. Revegetation	x	<input type="checkbox"/>	<input type="checkbox"/>

**Bond Renewal Date:** 2/25/2013 **Bond Amount:** \$256,000 **Permit fee:** paid through 2009

**Purpose of Inspection:** Western Clay has requested an amendment to their current NOI with plans for a new pit (Red Pit Expansion) and an additional 10.4 acres of disturbance. With this request the quarry would have a total of 68 permitted acres. Corey Thurston (mine manager-Western Clay) and John Rogers (DOGM) had discussed several issues with this new amendment. The calculation of the reclamation bond and the reclamation of current pits were the issues that needed further analysis. It was difficult to assess these issues without seeing the quarries. I felt that the amended NOI allowed for reclaimed slopes that were too steep. To address this, more fill would have to be utilized in order to bring the reclaimed slopes to a 3:1 slope for unconsolidated clay. It was necessary to inspect the site in order to calculate an accurate bond and proper reclamation. Therefore, a site inspection was arranged to better assess the property.

**Inspection Summary:** The first quarry that was inspected was the North Sheep Trail Pit. It had been totally reclaimed (regraded and re-seeded). The area was very muddy, therefore a close inspection of the revegetation process could not be analyzed. However, from a distance it appeared to be very good. It will be monitored later in the season for re-growth.

The majority of the site inspection was concerned with the active pits and their future reclamation plans. The pits are large and deep. There are four pits: 1-Sheep Trail South Pit, 2-Sheep Trail Flat Pit, 3-Red Pit, 4-North Slope Pit. Significant overburden will have to be moved into the pits to create a 3:1 slope. The mine has just purchased a haul truck that will allow them to back haul waste sand from the plant and begin filling the pits. Western Clay has stockpiled significant overburden and isolated topsoil. They will also back haul waste sand from the processing plant in order to fill the pits. In addition, with the new Red Pit Expansion, significant overburden will be removed from the hill that will be mined.



Western Clay's mine plan is to reclaim old pits as new pits are opened. The waste product at the plant accounts for 1/3 of mined product and will be transported back to the pits for fill. Concurrent reclamation will begin with the Sheep Trail Pit and move to other pits as they are mined out.

Water drainage into reclaimed depressions was thought to be a possible problem. However, the hills that surrounds the quarries do not have any direct drainages into the pits and show no signs of storm drainages, gullies or wash outs. The area had a very wet winter and there was minimal water collected in the bottom of the quarries. Water impounding would not be an issue.

After further analysis and field investigation, the overburden requirement on the bond calculation was increase 58%. This allowed for the mine to bring the slopes of the reclaimed pits to a minimum 3:1 slope with a goal to bring the property back to near original contour. With this analysis the reclamation bond was set at \$425,000. This was communicated to Corey Thurston and Western Clay was in agreement with is amount.

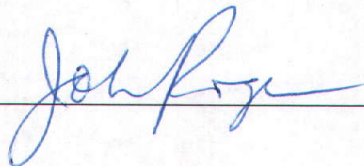
Photos were taken to document site conditions. YES

**Conclusions and Recommendations:** Operator should continue concurrent reclamation and utilize the haul truck for back hauling waste products back to the mine for reclamation.

**Inspector's Signature** \_\_\_\_\_

JCR

Corey Thurston – Western Clay



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Reclaimed North Slope Trail Pit – looking north



Overburden and fill – Sheep Trail South pit area



Sheep Trail Flat Pit – looking southwest



Sheep Trail Flat Pit – looking south



Red Pit looking north – orange hill to north is area of Red Pit Expansion



Red Pit – looking north



North Slope Pit – looking north



Haul Truck dumping waste rock into North Slope Pit